

## **REMARKS**

Claims 1, 3-9, 11-13, 15, 17, and 18, are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the amendments and remarks contained herein.

## **SPECIFICATION**

The specification stands objected to for certain informalities. Applicant has amended the specification according to the Examiner's suggestions. Therefore, reconsideration and withdrawal of this objection are respectfully requested.

## **REJECTION UNDER 35 U.S.C. § 102**

Claims 1-5, 10 and 11 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,738,181 (Nakamoto). This rejection is respectfully traversed.

Nakamoto is directed generally to an apparatus that compensates in advance for chromatic dispersion occurring in WDM optical signals. Referring to Figure 7 of Nakamoto, the Examiner notes that dispersion compensation occurs at different optical layers. However, since this reference is only concerned with dispersion compensation, it does not teach or suggest performing signal impairment compensation on each of the optical signal within a given layer. Rather, Nakamoto teaches that dispersion compensation is not needed for each of the optical signals (e.g., see col. 20, lines 1-3 as well as col. 21, lines 60-62). Thus, Nakamoto teaches away from performing dispersion compensation on each of the optical signals within a given layer. It should

also be noted that Nakamoto fails to disclose the appropriateness of other types of signal impairment compensation techniques.

In contrast, Applicant's invention is directed to an architectural arrangement that enables optical switching at different optical layers within an optical transport network. To enable switching, signal impairment compensation is performed at each layer of the network. For instance, dispersion compensation is applied at each layer to equalize signal impairment levels. Furthermore, gain flattening and optical transient suppression are also applied at each layer. Unlike dispersion compensation, these techniques must be applied to each optical signal within a given layer to achieve the signal power needed to traverse long distances. Claims 1 and 5 have been amended to further define this aspect of the present invention. Therefore, it is respectfully submitted that Claims 1 and 5, along with claims depending therefrom, defines patentable subject matter over Nakamoto. Accordingly, applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Claims 12-14 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,631,018 (Milton). This rejection is respectfully traversed.

One aspect of Applicant's invention enables optical switches to be used at different optical layers of a network switching site. Claim 12 has been amended to further define an architectural arrangement for a network switching site in accordance with this aspect of the present invention. For instance, Claim 12 recites "a sub-band level optical switch adapted to receive optical sub-band signals from the band level optical switch and the sub-band level demultiplexing component and operable to route at least one of the optical sub-band signals amongst the second and third optical

transport lines” in combination with other elements of the claim. Thus, the sub-band level switch is able to receive inputs from either a demultiplexing component or a higher level switch. In contrast, Milton fails to teach or suggest an architectural arrangement as recited in Claim 12 of the present application. Therefore, it is respectfully submitted that Claim 12, along with claims depending therefrom, defines patentable subject matter over Milton. Accordingly, applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Claims 12, 14 and 16 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,778,739 (Jerphagnon). This rejection is respectfully traversed.

Likewise, Jerphagnon fails to teach or suggest an architectural arrangement for a network switching site as recited in Claim 12 of the present application. Therefore, it is respectfully submitted that Claim 12, along with claims depending therefrom, defines patentable subject matter over Jerphagnon. Accordingly, applicants also respectfully request the Examiner to reconsider and withdraw this rejection.

Claims 17 and 18 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,137,604 (Bergano). This rejection is respectfully traversed.

Bergano is directed generally to a technique for compensating for chromatic dispersion that accrues in an optical transport network. This reference is deficient in many respects. For example, Bergano introduces dispersion compensation at only one layer of an optical signal (e.g., see Fig. 3). Thus, this reference fails to disclose signal impairment compensation mechanisms distributed across each optical layer as recited in Claim 17 of the present application. In addition, Bergano fails to disclose a network

switch that routes optical signals amongst two optical transport lines. Contrary to the Examiner's assertion, a wavelength dependent coupler 503 does not route signals amongst two destination. For at least these reasons, Claim 17, along with claims depending therefrom, defines patentable subject matter over Bergano. Accordingly, applicants also respectfully request the Examiner to reconsider and withdraw this rejectionwe feel that

Claims 19-21 and 23-25 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,449,073 (Huber). This rejection is respectfully traversed.

It is believed that the originally filed claims are patentably distinct over this reference. However, in order to expedite prosecution of this application, Claims 19-26 have been cancelled from the present application, thereby rendering this rejection moot. Accordingly, applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Claims 19, 22, 23 and 26 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,545,783 (Wu). This rejection is respectfully traversed.


It is believed that the originally filed claims are patentably distinct over this reference. However, in order to expedite prosecution of this application, Claims 19-26 have been cancelled from the present application, thereby rendering this rejection moot. Accordingly, applicants respectfully request the Examiner to reconsider and withdraw this rejection.

**CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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